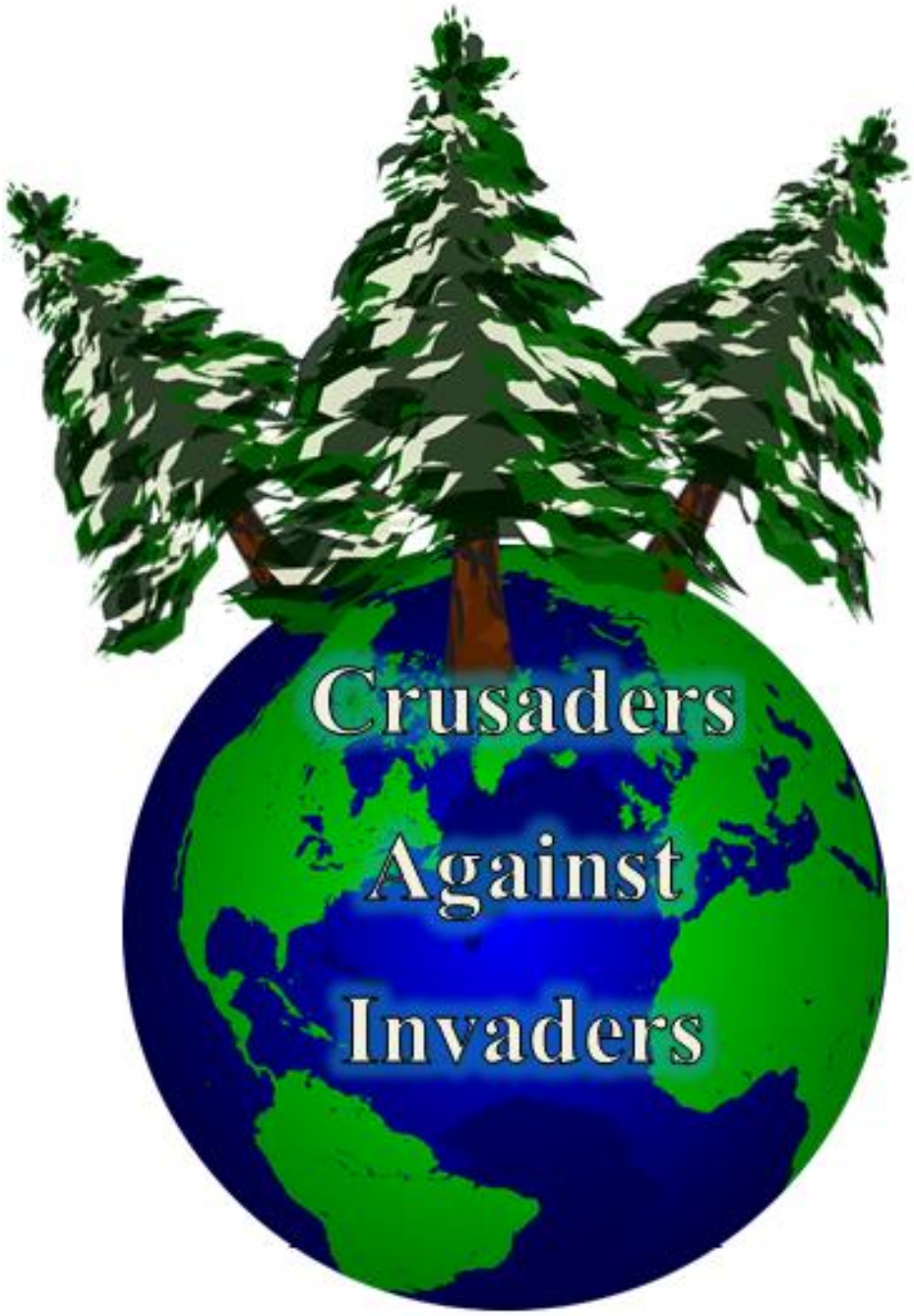
Licking Regional Envirothon Speech



We are the Crusaders against Invaders, and we would like to give a special "thank you" to you for inviting us here today! You have asked us to develop a public awareness campaign against invasive species, and some are likely wondering why they are considered an issue. The truth is that they are harming your park, and steps need to be taken to protect this city's precious ecosystem for the community now and future generations.

An invasive species is defined by Federal Executive Order 13112 as non-native to the ecosystem and whose introduction is likely to cause damage to the environment, economy, and/or human health. Invasive species cause major ecological impacts, including, as described by the Center for Invasive Species Management, decreased biodiversity, and they are the second leading cause of animal extinction worldwide. Certain species can also increase soil erosion and cause damage to streams and other wetland areas. Property values can be decreased as well. The National Invasive Species Council estimates that invasives cost the United States at least 127 billion dollars—127 billion dollars—each year by reducing productivity in agriculture, forestry, and aquatics, as well as reduction in revenue from recreational activities, such as fishing. One of the most direct ways invasives affect human health is by spreading pathogens that cause diseases.

Now, here's the general plan. The first step in any invasive species plan is prevention. It is true that "an ounce of prevention is worth a pound of cure." The park system already has at least five invasives present although the degree of their infestations is unknown. Their mere presence indicates that they are already causing harm and the earlier an invasive species is addressed means a higher likelihood of success in its management. Waiting means that the battle is harder and more costly because they have expanded their range in the native ecosystem.

So, that brings us to step two: surveying and detection. An inventory will be necessary to determine the location and abundance of present species. It is important to not only identity which species cause the greatest risk but also the areas subject to the greatest risk because some species and areas are more difficult to manage.

The next step is creation and implementation of the management part of the plan, with the goal of (1) controlling invasives and (2) restoring native habitat. Yes, controlling and restoring.

The next step is one that must exist throughout the entire project. As the Center for Invasive Species management describes, "The greatest instrument in the prevention and control of invasive species is education." Steps must be taken to educate the public and ultimately inspire them. The only way the plan will have a lasting impact is if caring individuals want to make a change out of love for their park. Long-term success not only depends on the park managers but the whole community.

Examination of the park has revealed species and areas that pose higher risks to the management plan. The perennial stream and the multiple lakes will likely be the most difficult to manage because of the threat of didymo. The fifty forested acres and the fifteen acres of

woodland face multiple invasive threats, including emerald ash borer, bush honeysuckle, and sericiea lespedeza; the grassland may contain lespedeza as well.

Now, for a look at some of the more specific needs and plans. According to the MDC, species such as Feral Hogs are dangerous and spread diseases. Their rooting and wallowing cause soil erosion, reduces water quality, and damages habitats. They compete with native wildlife, such as deer and turkeys, and consume ground nesting birds and even fawns. Concentrated trapping efforts would be necessary to eliminate the feral hogs in the park. However, for long-term success, the landowners and park managers must work together to thoroughly eradicate the population.

Bush honeysuckle competes with native plants by creating a thick understory that limits sunlight, soil moisture and nutrients, and can dominate areas with its large spreading roots. For example, imagine an area that was once filled with flowering dogwoods and redbuds now choked by thick masses of honeysuckle. The Conservation Commission of Missouri also describes how it is even suspected to produce allopathic chemicals that inhibit the growth of nearby plants. When it comes to a food source, the honeysuckle fruits do not provide the high-fat content needed by migrating birds. For control, hand-pulling can be an option when the plant is small, but larger plants must be removed by methods such as the cut-stump method, foliar spray, the basal-bark method, and controlled burning. Once removed, native plants with wildlife benefits and natural beauty can flourish, such as plums and dogwoods. Yes, controlling and restoring.

Another invasive, sericea lespedeza, prefers full sun but can survive in partial shade and is also tolerant to drought and flooding. The tannin inside makes it inedible and causes overgrazing of nearby plants, and it also produces chemicals that stunt nearby plant growth. It can outcompete native plants for water and nutrients. The best control is early detection followed by spraying all plants with effective herbicides from July through September. Once established, the MDC describes how an integrated approach is the most effective, including mowing, spraying, and burning. It also drops thousands of seeds that can survive for more than twenty years, so some areas will require prolonged treatment. However, imagine the difference between trails dominated by Sericea Lespedeza to natural patches of blossoming wild flowers such as indigos and asters. Yes! Again controlling and restoring.

Emerald Ash Borer, according to the Missouri Department of Agriculture, has killed tens of millions of ash trees, has cost millions of dollars in damage, and has “cause[d] regulatory agencies to enforce quarantines and fines to prevent potentially infested ash trees, logs, or firewood from moving out of areas where [it]…occurs.” It will be crucial to perform a complete inventory to determine the extent and severity of infected trees. Resistant trees can replace the removals. Taking steps to counter this invasive means the difference between stands of dead trees and areas of flourishing green canopies. Again, controlling and restoring.

An inventory of the park's stream and lakes will determine Didymo's location. This algae, frequently called rock snot, "forms large mats on the bottoms of lakes, river and streams," according to the MDC's "Don't Spread Didymo" article. It causes changes in stream chemistry and macroinvertebrate populations that can lead to lowered fish populations. Wading becomes slippery and the fishing industry can suffer from interference with boat motors and fishing gear. An inventory of the park's stream and lakes will determine the location of didymo. Didymo is primarily spread through waders, fishing equipment, and watercrafts. Individuals in contact with infected water should comply with the ban on porous-soled waders, and treat all potentially exposed equipment with an effective solution, such as 2% household bleach to prevent additional spreading.

Each invasive needs management that is effective and complies with regulations and acts. Examples include the Clean Boating Act of 2008, the Public Corps Healthy Forests Restoration Act, the Plant Protection Act, and the Federal Plant Pest Act. After the survey is completed and the exact budget is determined, the Park could also apply for funding, such as the Pulling Together Initiative grant, which is against invasive weeds and funded by the Bureau of Land Management, U.S. Fish and Wildlife Service, and the USDA Forest Service. The community could also hold fundraising events and form supportive organizations, such as the "Friends of Greenfield City Park." Many parks do earn funding through a local sales tax as well.

As mentioned before, education will be vital. We would recommend organizing meetings to inform citizens on the selected management plan and listen to any suggestions or concerns. The Park could even create a website and social media accounts such as Facebook and Twitter to keep individuals informed and interested. Workshops could be held on invasive identification and management, such as recognizing signs of emerald ash borer or replanting trees. Local groups, such as the school's FFA group, church youth groups, 4H clubs, and science clubs could even help build hog traps and remove bush honeysuckle. By showing the community the damage and the steps to restoration, they can see why a change is needed and become a part of that change. Involvement leads to awareness, which leads to interest and inspiration, which leads to more involvement and even donations. They realize that they are making a lasting impact on not just a healthier park, but a healthier world. The community will be inspired to make more changes, knowing that the choices they make will leave a legacy for generations to come. This is not only about natural restoration; it is about teaching your children and entire community to invest not only in their park but also their futures, that each decision and every change you make is a thread in the giant tapestry of the world around you.